

### In the Abstract

***Kindly insert the following:***

A method of estimating call intents and recalls in a call center including (a) assessing  $N$  corresponding to a number of periods during which recall assessments are performed; (b) assessing  $\alpha_i$  representing a proportion of disconnected calls that call back during an  $i^{\text{th}}$  period following disconnection; (c) assessing  $\beta_i$  representing a proportion of abandoned calls that call back during an  $i^{\text{th}}$  period following abandonment; (d) assessing call status variables:  $Dec(p)$  representing the number of calls disconnected during a period  $p$ ;  $Abd(p)$  representing the number of calls abandoned during a period  $p$ ;  $Reçus(p)$  representing the number of calls received during period  $p$ ; (e) estimating the number of recalls,  $rappels(p)$ , during the period  $p$ , with

$$rappels(p) = \sum_{i=0}^N \alpha_i \cdot dec(p-i) + \beta_i \cdot abd(p-i), \text{ where } p-i \text{ represents the period that precedes } p$$

of  $i$  periods;

and (f) assessing the number of call intents during a period  $p$ ,  $intentions(p) = reçus(p) - rappels(p)$ .